[40116/05801]

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicants	:	Desai et al.
Serial No.	:	09/716,604
Filed	:	November 20, 2000
For	:	Distributed-Service Architecture at the Point of Sale or Service
Group Art Unit	:	2182
Examiner	:	Justin R. Knapp

Mail Stop: Appeal Brief-Patent
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

Certificate of Mailing
I hereby certify that this correspondence is being deposited with U.S. Postal Services as first class mail in an envelope addressed to:

Mail Stop: Appeal Brief-Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

By: Date: June 28, 2005
Oleg F. Kaplun, (Reg. No. 45,559)

TRANSMITTAL

In support to the Notice of Appeal filed on April 28, 2005, enclosed please find an Appeal Brief for filing in the above-identified application. Please charge the credit card of Fay Kaplun & Marcin, LLP in the amount of $500.00. The Commissioner is hereby authorized to charge any additional fees to the Deposit Account of **Fay Kaplun & Marcin, LLP No.** 50-1492. A copy of this paper is enclosed for that purpose.

Respectfully submitted,

Dated: June 28, 2005

By: _____
Oleg F. Kaplun, Reg. No. 45,559

Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, New York 10038
Tel: (212) 619-6000
Fax: (212) 619-0276

AF
ZW

PATENT
Attorney Docket No.: 40116 - 05801

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE
BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

In re Application of:	)	
	)	
Apurva M. Desai et al.	)	
	)	
Serial No.: 09/716,604	)	Group Art Unit: 2182
	)	
Filed: November 20, 2000	)	Examiner: Justin R. Knapp
	)	
For: DISTRIBUTED-SERVICE ARCHITECTURE AT THE POINT OF SALE OR SERVICE	)	**Board of Patent Appeals and Interferences**

Mail Stop: Appeal Brief - Patents
Commissioner for Patents
P.O. Box 1450
Alexandria, VA 22313-1450

APPEAL BRIEF UNDER 37 C.F.R. § 41.37

In support of the Notice of Appeal filed on April 28, 2005, and pursuant to 37 C.F.R. § 41.37, Appellants present in triplicate an appeal brief in the above-captioned application.

This is an appeal to the Board of Patent Appeals and Interferences from the Examiner's final rejection of claims 12-31 in the final Office Action dated January 12, 2005. The appealed claims are set forth in the attached Appendix A.

1. Real Party in Interest

This application is assigned to Symbol Technologies, Inc., Holtsville, New York, the real party in interest.

2. Related Appeals and Interferences

There are no other appeals or interferences which would directly affect, be directly affected, or have a bearing on the instant appeal.

3. Status of the Claims

Claims 12-31 have been rejected in the final Office Action. The final rejection of claims 12-31 is being appealed.

4. Status of Amendments

All amendments submitted by Appellants have been entered.

5. Summary of Claimed Subject Matter

The present invention relates to protocol converters, distributed-service architectures and point-of-sale or point-of-service (POS) terminals. More specifically, the invention relates to accessing legacy and new POS services in a POS terminal. (*See* Specification, p. 2, ll. 7-10). One known problem with a conventional POS system is that all peripherals that the conventional system needs to support must be determined at the time the

operating system is constructed. Adding a new service requires configuring and compiling a new version of the operating system and acquiring new application software to take advantage of the new service. (*See* Specification, p. 3, ll. 8-14). Loading of the new operating system and software often requires the conventional system to be taken offline. (*See* Specification, p. 3, ll. 15-17). The present invention provides for a system in which an addition of a new service peripheral does not require rebuilding of the operating system and software, thus allowing the system to remain operational while the new service is added. (*See* Specification, p. 6, ll. 8-16).

In one aspect of the present invention, a POS system includes a communications link which communicatively interconnects a POS register, a protocol converter, and a transaction controller. The link may be an ethernet running TCP/IP. (*See* Specification, p. 4, l. 30 - p. 5, l.1). The protocol converter may convert communications using legacy protocols utilized by peripheral devices coupled thereto into communications using a protocol utilized by the link. (*See* Specification, p. 5, ll. 11-15). A second communications link may communicatively couple a data center and the transaction controller, which mediates a processor's access to the services of the peripherals through the second link. (*See* Specification, p. 5, ll. 8-28).

In the POS system, intelligence to conduct a transaction may partially reside in the register. The transaction controller may also contain intelligence to communicate with peripherals. (*See* Specification, p. 6, ll. 4-7). When a new service peripheral is added, the intelligence of the transaction controller may be sufficient or may be increased to interact with

the new peripheral, allowing the register to continue transaction processing while the new peripheral is added. (*See* Specification, p. 6, ll. 8-16). When a new peripheral replaces an old one, the transaction controller may filter communications by reading transmissions destined for the old peripheral and supply transmissions for the new peripheral. Where the new peripheral is incapable of responding to the register in an expected manner, the transaction computer may convert transmissions from the new peripheral to the register. (*See* Specification, p. 6, ll. 17-27).

6. Grounds of Rejection to be Reviewed on Appeal

I. Whether claims 12, 13, 23-26 and 29-31 are unpatentable under 35 U.S.C. § 102(e) as anticipated by U.S. Patent No. 6,415,341 to Fry et al. ("Fry").

II. Whether claims 14-22 are unpatentable under 35 U.S.C. § 103(a) as obvious over Fry.

III. Whether claims 27 and 28 are unpatentable under 35 U.S.C. § 103(a) as obvious over Fry in view of http://www.sun.com/jini ("Sun").

7. Argument

I. The Rejection of Claims 12, 13, 23-26 and 29-31 Under 35 U.S.C. § 102(e) as Being Anticipated by U.S. Patent No. 6,415,341 to Fry et al. Should Be Reversed.

In the Final Office Action, the Examiner rejected claims 12, 13, 23-26 and 29-31 under 35 U.S.C. § 102(e) as being anticipated by Fry. (*See* 1/12/05 Office Action, ¶ 2). Fry relates to a system for expanding POS terminal compatibility using an adapter for connecting to a computer terminal in a POS system. More specifically, Fry describes a protocol converter/print share device, which functions as the adapter and is connected to a POS terminal via an RS-485 I/O channel. (*See* Fry, col. 5, ll. 16-19). The protocol converter operably converts the RS-485 commands from the POS terminal to RS-232 commands, prioritizes the commands, and sends them to a printer in a format which the printer understands. (*See* Fry, col. 4, ll. 29-34). The protocol converter also transmits data back to the POS terminal in order to emulate the operation of a printer with which the POS terminal is compatible. (*See* Fry, col. 4, ll. 34-38). The protocol converter can further format commands from the POS terminal to control peripheral devices attached to a personal computer (PC) client. (*See* Fry, col. 5, ll. 31-34).

Functions of external devices, such as the printer, which are not directly supported by the POS terminal may be enabled using a feature card ("feature C") port and programming the POS terminal to transmit headers, commands, and data from the feature C port as raw data. (*See* Fry, col. 4, ll. 41-61). The protocol converter then emulates a feature C device and responds to

commands transmitted by the POS terminal in the feature C format. (*See* Fry, col. 4, l. 65 - col. 5, l. 6). Fry also states that the protocol converter may provide adaptability by programming a flash ROM disposed therein to recognize and transmit particular signals and sequences. (*See* Fry, col. 6, ll. 12-16).

Claim 12 of the present application recites a distributed service system comprising "a register device for conducting a transaction" and "a first peripheral device configured to communicate information regarding the transaction according to a first protocol" and "a protocol converter coupled to the register device and the first peripheral device, the protocol converter configured to receive information from the first peripheral device according to the first protocol and communicate the information using TCP/IP" in combination with "*a transaction controller coupled to the protocol converter and the register device, the transaction controller operable to facilitate communication between the register device and the protocol converter.*"

The Examiner states that the protocol converter described by Fry acts as a transaction controller because it facilitates communication between the register device and the protocol converter. (*See* 1/12/05 Office Action, ¶ 3). In support of this contention, the Examiner further states that the RS-485 transceivers of the protocol converter purportedly function as transaction controllers because they are responsible for facilitating communication between the register and the protocol converter components. (*See* 4/5/05 Advisory Action, p. 2). However, the transceivers do not meet the requirements for qualifying as a transaction controller because

they lack the intelligence to interact with devices in the manner ascribed to the transaction controller of the present invention. According to the specification of the present invention, the transaction controller is "programmed to interact with a new peripheral" and "mediates any interaction with the new peripheral." (*See* Specification, p. 6, ll. 17-20). This interaction extends beyond simply converting between protocols. For example, the transaction controller is capable of receiving commands from the register, such as a scanner-initialization routine, and converting data parameters of the commands into a format that is understood by a peripheral. (*See* Specification, p. 6, l. 28 - p. 7, l. 9). The transceivers as related by Fry lack this capability, and merely allow data to be transmitted and received. Thus, in the rejection, the Examiner appears to have overlooked the controlling aspect of the transaction controller.

Furthermore, even if the protocol converter were in fact, a transaction controller as the Examiner contends, this would render the claim that the transaction controller "facilitate[s] communication between the register device and the protocol converter" moot since the protocol converter would be facilitating communication between the register and itself. If the protocol converter was a transaction controller, there would be no need for any facilitation of communication between the protocol converter and the register. However, there exists such as need because in addition to converting between protocols, instructions and data must be recognized, interpreted, and if necessary, converted. The fact that the transaction controller and the protocol converter are functionally distinct is pertinent to the operation of the present

invention and satisfies this need. If a new device not supported by the POS terminal were added to the system taught by Fry, the POS terminal—and possibly the protocol converter as well—would need to be reprogrammed. This is because there is no transaction controller to facilitate communication between the protocol converter and the register. Since Fry does not disclose whether the system may be kept in an operational state when reprogramming occurs, it could not possibly contemplate a "transaction controller operable to facilitate communication between the register device and the protocol converter" for the purpose of keeping the system operational when a new device is added. Thus, it is respectfully submitted that Fry does not anticipate "a transaction controller coupled to the protocol converter and the register device, the transaction controller operable to facilitate communication between the register device and the protocol converter," as recited in claim 12. Therefore, it is respectfully requested that the rejection of claim 12 be reversed. Because claims 13, 23-26 and 29-30 depend from and, therefore, include all of the limitations of claim 12, it is respectfully submitted that these claims are also allowable, and that the rejections of these claims should be reversed.

Claim 31 of the present invention recites similar limitations to those of claim 12, including "operating a transaction controller remotely located from said register device and coupled to the protocol converter and the register device, the transaction controller operable to facilitate communication between the register device and the protocol converter." Accordingly,

it is respectfully submitted that this claim is also allowable for at least the reasons discussed above with respect to claim 12, and that this rejection be reversed.

II. The Rejection of Claims 14-22 Under 35 U.S.C. § 103(a) as Being Obvious Over Fry Should Be Reversed.

In the Final Office Action, the Examiner rejected dependent claims 14-22 under 35 U.S.C. 103(a) as being unpatentable over Fry. (*See* 1/12/05 Office Action, ¶ 11). The deficiencies of Fry have been discussed above. Therefore, Appellant respectfully submits that dependent claims 14-22 are allowable for the reasons stated above with regard to claim 12, and that this rejection be reversed.

III. The Rejection of Claims 27 and 28 Under 35 U.S.C. § 103(a) as Being Obvious Over Fry in view of Sun Should Be Reversed.

In the Final Office Action, the Examiner rejected dependent claims 27 and 28 under 35 U.S.C. § 103(a) as being unpatentable over Fry in view of Sun. (*See* 1/12/05 Office Action, ¶ 14). Sun relates to a network technology for building distributed systems running on a Java™ platform.

It is respectfully submitted that Sun does not cure the above-noted deficiencies of Fry. Therefore, Appellant respectfully submits that dependent claims 27 and 28 are allowable for

the reasons stated above with regard to claim 12. Thus, Appellant respectfully requests that the rejection of these claims be reversed.

8. Conclusions

For the reasons set forth above, Appellants respectfully request that the Board reverse the final rejections of the claims by the Examiner under 35 U.S.C. § 102(e) and 35 U.S.C. § 103(a), and indicate that claims 12-31 are allowable.

Respectfully submitted,

Date: 6/28/05

By: _____
Oleg F Kaplun (Reg. No. 45,559)

Fay Kaplun & Marcin, LLP
150 Broadway, Suite 702
New York, NY 10038

CLAIMS APPENDIX A

12. A distributed service system, the system comprising:

a register device for conducting a transaction;

a first peripheral device configured to communicate information regarding the transaction according to a first protocol;

a protocol converter coupled to the register device and the first peripheral device, the protocol converter configured to receive information from the first peripheral device according to the first protocol and communicate the information using TCP/IP; and

a transaction controller coupled to the protocol converter and the register device, the transaction controller operable to facilitate communication between the register device and the protocol converter.

13. A distributed service system according to claim 12, wherein the register device is a point-of-sale (POS) terminal.

14. A distributed service system according to claim 12, wherein the first peripheral device comprises a printer.

15. A distributed service system according to claim 12, wherein the first peripheral device comprises a signature-capture platform.

16. A distributed service system according to claim 12, wherein the first peripheral device comprises a PIN pad.

17. A distributed service system according to claim 12, wherein the first peripheral device comprises a scanner.

18. A distributed service system according to claim 12, wherein the first peripheral device comprises a check reader.

19. A distributed service system according to claim 12, wherein the first protocol comprises RS485.

20. A distributed service system according to claim 12, wherein the first protocol comprises RS232.

21. A distributed service system according to claim 12, wherein the first protocol comprises USB.

22. A distributed service system according to claim 12, wherein the first protocol comprises TCP/IP.

23. A distributed service system according to claim 12, further comprises a second register device coupled to the protocol converter, the protocol converter further configured to communicate information received from the first peripheral device with the second register device.

24. A distributed service system according to claim 12, further comprising a plurality of peripheral devices coupled to the protocol converter.

25. A distributed service system according to claim 12, wherein state information regarding the transaction is stored in the transaction controller and the register device.

26. A distributed service system according to claim 12, wherein the register device, the transaction controller, and the protocol converter each comprise an Ethernet connection.

27. A distributed service system according to claim 12, wherein the transaction controller provides Jini services.

28. A distributed service system according to claim 27, wherein the first peripheral is registered with the Jini services.

29. A distributed service system according to claim 12, wherein the register device is remotely located from the first peripheral device.

30. A distributed service system according to claim 12, wherein the transaction controller is remotely located from the peripheral device.

31. A method for operating a distributed service system, the method comprising:

operating a register device for conducting a transaction at a first location;

operating a first peripheral device configured to communicate information regarding the transaction according to a first protocol;

operating a remotely located protocol converter coupled to the register device and the first peripheral device by a TCP/IP communication link, the protocol converter configured to receive information from the first peripheral device according to the first protocol and communicate the information using TCP/IP; and

operating a transaction controller remotely located from said register device and coupled to the protocol converter and the register device, the transaction controller operable to facilitate communication between the register device and the protocol converter.